

CLAIMS:

1. A portable radio capable of communicating with at least one other portable radio over a wireless radio network, the radio comprising:

5 a processor operable for processing data corresponding to a feature of the radio;

a radio transceiver coupled with the processor and operable for -

transmitting voice communications to and receiving voice communications from the other radio, and

transmitting the data to the other radio; and

10 an input device coupled with the radio transceiver and the processor for initiating transmission of both the voice communications and the data to the other radio.

2. The portable radio as set forth in claim 1, wherein the input device is a push-to-talk button.

3. The portable radio as set forth in claim 2, wherein the data is transmitted after the push-to-talk button has been pushed and released so that the data is transmitted after transmission of the voice communications.

20 4. The portable radio as set forth in claim 2, wherein the data is transmitted when the push-to-talk button is first pushed so that the data is transmitted before transmission of the voice communications.

25 5. The portable radio as set forth in claim 3, wherein the radio transceiver continues to transmit the data for a pre-determined amount of time after the push-to-talk button has been released.

30 6. The portable radio as set forth in claim 1, further including a GPS receiver for receiving satellite signals from a plurality of satellites.

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7. The portable radio as set forth in claim 6, wherein the processor is coupled with the GPS receiver for calculating a location of the radio as a function of the satellite signals.

5 8. The portable radio as set forth in claim 7, wherein the data relates to the location of the radio.

9. The portable radio as set forth in claim 1, wherein the wireless radio network comprises a Family Radio Service (FRS) network.

10 10. A portable GPS/radio unit capable of communicating with at least one other portable GPS/radio unit over a wireless radio network, the GPS/radio unit comprising:

a GPS receiver for receiving satellite signals from a plurality of satellites;
a processor coupled with the GPS receiver for calculating a location of the GPS/radio unit as a function of the satellite signals;
a radio transceiver coupled with the processor and operable for -
transmitting voice communications to and receiving voice communications from the other GPS/radio unit, and
transmitting a radio signal to the other GPS/radio unit indicative of the location of the GPS/radio unit and receiving from the other GPS/radio unit a radio signal indicative of a location of the other GPS/radio unit; and
an input device coupled with the radio transceiver and the processor for initiating transmission of both the voice communications and the radio signal indicative of the location of the GPS/radio unit.

25 11. The portable GPS/radio unit as set forth in claim 10, wherein the input device is a push-to-talk button.

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12. The portable GPS/radio unit as set forth in claim 11, wherein the radio signal indicative of the location of the GPS/radio unit is transmitted after the push-to-talk button has been pushed and released so that the radio signal indicative of the location of the GPS/radio unit is transmitted after transmission of the voice communications.

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13. The portable GPS/radio unit as set forth in claim 11, wherein the radio signal indicative of the location of the GPS/radio unit is transmitted when the push-to-talk button is first pushed so that the radio signal indicative of the location of the GPS/radio unit is transmitted before transmission of the voice communications.

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14. The portable GPS/radio unit as set forth in claim 11, wherein the radio transceiver continues to be enabled to transmit the radio signal indicative of the location of the GPS/radio unit for a pre-determined amount of time after the push-to-talk button has been released.

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15. The portable GPS/radio unit as set forth in claim 10, further including a display coupled with the processor for displaying the location of the GPS/radio unit and the location of the other GPS/radio unit.

16. The portable GPS/radio unit as set forth in claim 10, further comprising a memory coupled with the processor.

17. The portable GPS/radio unit as set forth in claim 16, wherein cartographic data may be stored in the memory and displayed on the display.

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18. The portable GPS/radio unit as set forth in claim 10, wherein the wireless radio network comprises a Family Radio Service (FRS) network.

19. A method for displaying a location of a first portable GPS/radio unit on
a second portable GPS/radio unit, the method comprising the steps of:

receiving at the first portable GPS/radio unit satellite signals from a
plurality of satellites;

5 calculating the location of the first portable GPS/radio unit as a function of
the satellite signals; and

transmitting from the first portable GPS/radio unit both a voice
communication and a radio signal indicative of the location of the
first portable GPS/radio unit when a single input device on the first
10 portable GPS/radio unit is actuated.

20. The method as set forth in claim 19, wherein the input device is a
push-to-talk button.

21. The method as set forth in claim 20, wherein the radio signal indicative
of the location of the GPS/radio unit is transmitted after the push-to-talk button has been
pushed and released so that the radio signal indicative of the location of the GPS/radio
unit is transmitted after transmission of the voice communication.

22. The method as set forth in claim 20, wherein the radio signal indicative
of the location of the GPS/radio unit is transmitted when the push-to-talk button is first
pushed so that the radio signal indicative of the location of the GPS/radio unit is
transmitted before transmission of the voice communication.

23. A portable GPS/radio unit capable of communicating with at least one other portable GPS/radio unit over a wireless radio network, the GPS/radio unit comprising:

5 a GPS receiver for receiving satellite signals from a plurality of satellites;
a processor coupled with the GPS receiver for calculating a location of the GPS/radio unit as a function of the satellite signals;
a radio transceiver coupled with the processor and operable for -
transmitting voice communications to and receiving voice communications from the other GPS/radio unit, and
10 transmitting a radio signal to the other GPS/radio unit indicative of the location of the GPS/radio unit and receiving from the other GPS/radio unit a radio signal indicative of a location of the other GPS/radio unit; and
an input device coupled with the radio transceiver for initiating transmission of a radio signal to the other GPS/radio unit requesting that the other GPS/radio unit transmit a radio signal indicative of the location of the other GPS/radio unit.

20 24. The portable GPS/radio unit as set forth in claim 23, wherein the input device is a pushbutton switch.

25 25. The portable GPS/radio unit as set forth in claim 23, further including a display coupled with the processor for displaying the location of the GPS/radio unit and the location of the other GPS/radio unit.

26. The portable GPS/radio unit as set forth in claim 23, further comprising a memory coupled with the processor.

27. The portable GPS/radio unit as set forth in claim 26, wherein 30 cartographic data may be stored in the memory and displayed on the display.

28. The portable GPS/radio unit as set forth in claim 23, wherein the wireless radio network comprises a Family Radio Service (FRS) network.

29. A method for displaying a location of a first portable GPS/radio unit on a second portable GPS/radio unit, the method comprising the steps of:

receiving at the first portable GPS/radio unit satellite signals from a plurality of satellites;

5 calculating the location of the first portable GPS/radio unit as a function of the satellite signals; and

transmitting from the second portable GPS/radio unit a polling request to the first portable GPS/radio unit to prompt the first portable GPS/radio unit to transmit a radio signal indicative of the location of the first portable GPS/radio unit.

10 30. The method as set forth in claim 29, wherein the first portable GPS/radio unit automatically transmits the radio signal indicative of the location of the first portable GPS/radio unit upon receiving the polling request.

15 31. A portable GPS/radio unit capable of communicating with at least one other portable GPS/radio unit over a wireless radio network, the GPS/radio unit comprising:

20 a GPS receiver for receiving satellite signals from a plurality of satellites; a processor coupled with the GPS receiver for calculating a location of the

GPS/radio unit as a function of the satellite signals; and

25 a radio transceiver coupled with the processor and operable for -

transmitting voice communications to and receiving voice communications from the other GPS/radio unit, and

automatically transmitting a radio signal to the other GPS/radio unit indicative of the location of the GPS/radio unit without requiring a user of the GPS/radio unit to initiate such transmission.

30 32. The portable GPS/radio unit as set forth in claim 31, the radio transceiver being further operable for automatically receiving from the other GPS/radio unit a radio signal indicative of a location of the other GPS/radio unit without requiring the user of the GPS/radio unit to request the transmission.

33. The portable GPS/radio unit as set forth in claim 31, further including a display coupled with the processor for displaying the location of the GPS/radio unit and the location of the other GPS/radio unit.

5 34. The portable GPS/radio unit as set forth in claim 31, further comprising a memory coupled with the processor.

35. The portable GPS/radio unit as set forth in claim 34, wherein cartographic data may be stored in the memory and displayed on the display.

10 36. The portable GPS/radio unit as set forth in claim 31, wherein the wireless radio network comprises a Family Radio Service (FRS) network.

37. A portable radio capable of communicating with other portable radios over a wireless radio network, the radio comprising:

a transceiver for transmitting voice communications and location data to and receiving voice communications and location data from at least one of the other radios;

a continuous tone coded squelch system (CTCSS) for controlling audio output of the transceiver so that a user of the radio only hears certain selected communications transmitted over the network; and an auxiliary coding system that, when enabled, codes all location data transmitted by the transceiver so that the location data can only be decoded by other radios having a similar auxiliary coding system.

25 38. The radio as set forth in claim 37, further including -

a GPS receiver for receiving satellite signals from a plurality of satellites; and

30 a processor coupled with the GPS receiver for calculating a location of the radio as a function of the satellite signals.

39. The radio as set forth in claim 37, wherein the wireless radio network comprises a Family Radio Service (FRS) network.

40. A method of transmitting voice communications and location data between a plurality of radios, the method comprising the steps of:

coding the location data with a coding system so that the location data can only be decoded by radios having a similar coding system;

transmitting the voice communications along with a continuous tone coded squelch system (CTCSS) sub-audible tone so that radios receiving the voice communications will un-mute their audio if they have a CTCSS set to the sub-audible tone.

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41. A portable radio capable of communicating with at least one other portable radio over a wireless radio network, the radio comprising:

a radio transceiver for transmitting voice communications to and receiving voice communications from the other radio; and

a continuous tone coded squelch system (CTCSS) coupled with the radio transceiver for controlling audio output of the transceiver so that a user of the radio only hears certain communications transmitted over the wireless radio network, the CTCSS including a selector for selecting between a plurality of CTCSS tones that each, when selected, is transmitted by the radio transceiver and received by the other radio and used to enable audio output of the other radio only if the other radio has been set to the same CTCSS tone, the CTCSS further including an emergency CTCSS tone that, when selected and transmitted, enables the audio output of the other radio whether or not the other radio has been set to the same CTCSS tone as the radio.

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42. The radio as set forth in claim 41, wherein the emergency CTCSS tone is selected from existing CTCSS tones.

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43. The radio as set forth in claim 41, wherein the emergency tone is a new tone added to the CTCSS.

44. The radio as set forth in claim 41, further including -
a GPS receiver for receiving satellite signals from a plurality of satellites;
and
a processor coupled with the GPS receiver for calculating a location of the
radio as a function of the satellite signals.

45. A portable GPS/radio unit capable of communicating with at least one other portable GPS/radio unit over a wireless radio network, the GPS/radio unit comprising:

- a housing;
- a GPS receiver positioned in the housing for receiving satellite signals from a plurality of satellites;
- a GPS antenna coupled with the GPS receiver and extending substantially upward from the housing;
- a processor positioned in the housing and coupled with the GPS receiver for calculating a location of the GPS/radio unit as a function of the satellite signals;
- a radio transceiver positioned in the housing and coupled with the processor and operable for -
 - transmitting voice communications to and receiving voice communications from the other GPS/radio unit, and
 - transmitting a radio signal to the other GPS/radio unit indicative of the location of the GPS/radio unit and receiving from the other GPS/radio unit a radio signal indicative of a location of the other GPS/radio unit;
- a radio antenna coupled with the radio transceiver and extending substantially upward from the housing; and
- an input device positioned on the housing and coupled with the radio transceiver and the processor for initiating transmission of both the voice communications and the radio signal indicative of the location of the GPS/radio unit.

46. The portable GPS/radio unit as set forth in claim 45, wherein the input device is a push-to-talk button.

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